

AP Enzyme Lab

PRELAB:

Read pp. 19-20 of Lab

1. Describe the specifics of the reaction that you will observe in this lab.
2. List some variables you could change to see how they affect enzyme activity.

Read p. 21 and top of p. 22

3. Why is the reaction rate of an enzyme only determined by the initial linear part of the curve?
4. Determine the rate between minutes 1 & 2.
5. How is the graph measuring the rate of reaction?

Read p. 22

6. Summarize the general procedures for the lab
7. What is the importance of KMnO_4 in the procedure?

SKIP Exercise 2A, Read exercise 2B. The H_2O_2 (peroxide) we will use is called a solution because there is pure H_2O_2 **mixed with water**, so not all the liquid is actually peroxide.

8. Explain why a baseline must be determined to obtain correct data for this lab.
9. Summarize the procedures on p. 24.

SKIP exercise 2C, there is NO H_2O_2 spontaneously decomposed in 24 hours...hence why an enzyme is needed!

Read Exercise 2D & summarize the steps.

I will perform the CONTROL portion of this lab and all students will document the results. You will then perform an experiment to determine the experimental values.

Independent Investigation (EACH PERSON MUST PERFORM INDIVIDUALLY): You are responsible for manipulating one variable for this lab. It is your responsibility to figure out a variable, ask me for the materials needed and perform as you see fit. I will provide NO GUIDANCE as this is your final lab for the year. Your procedures, results and analysis of the results will be graded with my **highest expectations**, so be sure you research factors that affect enzymes, obtain the materials needed from me or an outside resource, document graphs/tables accurately, and analyze appropriately. GOOD LUCK!

THIS LAB REPORT IS MANDATORY FOR ALL STUDENTS – 100 POINTS